SAFETY SWITCH

FIELD OF THE INVENTION

[0001] The present invention relates to a switch that cuts the circuit by using a bimetallic plate when overload and no fuse or breaker is required.

BACKGROUND OF THE INVENTION

[0002] A conventional switch known to applicant is disclosed in Figures 1 and 2 and generally includes a base 1 with two terminals 7 and a conductive plate 27. The two terminals 7 each have a first contact point 9 and the conductive plate 27 has two second contact points 271 which are lowered to contact the first contact points 9 by pushing a button assembly 25. A first spring 11 is biased between the inside of the base 1 and the conductive plate 27 and a second spring 23 is biased between the button assembly 25 and the conductive plate 27, wherein the first spring 11 has a larger spring force than the second spring 23 so that the conductive plate 27 is located at a position as shown in Figure 1. When pushing the button 252 of the button assembly 25, the conductive plate 27 is lowered and the second contact points 271 contact the first contact points 9 as shown in Figure 2. The conductive plate 27 is raised by the first spring 11 when the button 252 is pushed again and released by the operation of the mechanism of the button assembly 25. This switch cannot respond when the current overflows so that many safety switches are developed, such as U.S. Patent Nos. 5,786,742, 5,223,813, 4,937,548, 4,661,667, 5,223,813, 4,931,762, 5,451,729, and 4,704,594. A common shortcoming of the safety switches is that there is a complicated mechanism involved in each base and most of them is suffered by a problem of delay response.

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[0003] Therefore, it is desired to have a safety switch that requires only a simple structure which responses the current overflow so as to cut off the circuit.